Atty. Docket No. YOR919990210US2 (8728-282 CON)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S):   Joseph Gil et al.

SERIAL NO.:   Not Yet Assigned

FILED: Concurrently Herewith   DATED: March 24, 2004

FOR: METHODS FOR IMPLEMENTING VIRTUAL BASES WITH FIXED
                  OFFSETS IN OBJECT ORIENTED APPLICATIONS

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to Applicant(s) duty of disclosure, the information listed in the attached

form PTO-1449 is brought to the attention of the Examiner. Copies of the listed items

were previously provided in the parent application.

The citation of the listed items is not a representation that they constitute a

complete or exhaustive listing of the relevant art or that the references are prior art.

CERTIFICATION UNDER 37 C.F.R. § 1.10

I hereby certify that this Application transmittal and the documents referred to as enclosed are being deposited with the United States Postal Service on this date _March 24, 2004_ in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number EV413370164US addressed to: Commissioner for Patents, Alexandria, VA 22313

Michele Fleitman

The items listed are submitted in good faith, but are not intended to substitute for the Examiner's search. It is hoped, however, that in addition to apprising the Examiner of these particular items, they will assist in identifying fields of search and in making as full and complete a search as possible.

The filing of this information disclosure statement is not an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

[X]   This information disclosure statement is being filed within three (3) months of the filing date of this application.

[]   This information disclosure statement is being filed concurrently with the Request for Continued Examination (RCE) attached herewith

[]   This information disclosure statement is being filed within three (3) months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application.

[]   To the best of Applicant(s) knowledge, this information disclosure statement is being filed before the date of mailing of a first Office Action on the merits in connection with this case.

[]   Statement under 37 C.F.R. § 1.97(e):
I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this statement.

[]   Enclosed herewith is a petition under 37 C.F.R. §1.97(d)(ii).

[]   Enclosed by check is the petition fee of $130.00. 37 C.F.R. §1.17(i)(1))

[]   Please charge the $130.00 petition fee to Deposit Account No. 50-0510/IBM (Yorktown Heights).

[]   Enclosed by check is the $180.00 fee required by 37 C.F.R. §1.17(p).

[]   Please charge the $180.00 fee required by 37 C.F.R. §1.17(p) to a Credit Card. Form PTO-2038 is enclosed.

[X]   Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. §1.16 and/or §1.17 at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account 50-0510/IBM (Yorktown Heights). Also, in the event any extensions of time for responding and/or a petition under 37 C.F.R. §1.17(i)(i) are required for the pending application(s), please treat this paper as a petition to extend the time and/or enter this Information Disclosure Statement as required and charge Deposit Account No. 50-0510/IBM (Yorktown Heights) therefor. TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

The claims of the application as now presented are believed to patentably distinguish over the prior art and to be in condition for allowance. Early and favorable consideration of the case is respectfully requested.

Respectfully submitted,

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Form PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. YOR919990210US2 (8728-282 CON)	SERIAL NO. Not Yet Assigned
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		APPLICANT Joseph Gil et al.	
		FILING DATE Concurrently Herewith	GROUP ART UNIT

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		5,794,041	8/11/98	Law et al.			
		5,590,327	12/31/96	Biliris et al.			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

		1	Pugh et. al., "Two-directional record layout for multiple inheritance", Proceedings of the ACM SIGPLAN '90 Conference on Programming Language Design and Implementation, White Plains, NY, June 20-22, 1990, pp. 85-91
		2	Erik Ernst, "Propagating Class and Method Combination", Proceedings of the 13th European Conference on Object-Oriented Programming (ECOOP'99), Lecture Notes in Computer Science, Lisbon, Portugal, June 1999, R. Guerraoui, ed., Springer Verlag, pp. 67-91
		3	Burke et. al., "A Framework for Evaluating Space and Time Overhead for C++ Object Models", Research Report RC 20421, IBM, TJ Watson Research Center, March 1996, Declassified Jan. 1998, pp. 1-28
		4	Cardelli et. al., "On Understanding Types, Data Abstraction, and Polymorphism", Computing Surveys, Vol. 17, No. 4, December 1985, pp. 471-522
		5	Gil et. al., "The Complexity of Type Analysis of Object Oriented Programs", Proceedings of the 12th European Conference on Object-Oriented Programming (ECOOP'98), Lecture Notes in Computer Science, Brussels, Belgium, July 1998, E.Jul., editor, Springer Verlag, pp. 601-634
		6	Carter et. al., "Universal Class of Hash Functions", Journal of Computer and System Sciences 18, (1979) pp. 143-154

EXAMINER	DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])

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		7	Chambers et. al., "Whole-Program Optimization of Object-Oriented Languages", Technical Report UW-CSE-96-06-02, U. of Wash., Dept. of Computer Science and Engineering, June 1996, pp. 1-70
		8	Nackman et. al., "Base-Class Composition with Multiple Derivation and Virtual Bases", Proceedings of the Sixth Usenix C++ Technical Conference, Cambridge, MA, April 11-14, 1994, pp. 57-71
		9	Karasick et. al., "The Architecture of Montana: An Open and Extensible Programming Environment with an Incremental C++ Compiler", Proceedings of the Foundations of Software Engineering (FSE'98), Orlando, FL., Nov. 1997, pp. 131-142
		10	Garey et.al., "Computers and Intractability: A Guide to the Theory of NP-Completeness", W.H. Freeman and Co., pp. 1-15, 194-195,1979
		11	Tip et. al., "Class Hierarchy Specialization", Proceedings of the Twelfth Annual Conference on Object-Oriented Programming Systems, Languages, and Applications (OOPSLA'97), Atlanta GA, pp. 271-285, Oct. 1997 (also published in ACM SIGPLAN Notices 32(10), 1997)
		12	S. Krogdahl, "Multiple Inheritance in Simula-Like Languages", BIT 25, pp. 318-326, 1984

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							YES	NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

		13	A. Myers, "Bidirectional Object Layout for Separate Compilation", Proceedings of the 10th Annual Conference on Object-Oriented Programming Systems, Languages, and Applications (OOPSLA'95), pp. 124-139, Austin, Texas, USA, October 15-19, 1995 (also published in ACM SIGPLAN Notices 30(10), Oct. 1995)
		14	Rossie, Jr., et. al., "An Algebraic Semantics of Subobjects", Proceedings of the 10th Annual Conference on Object-Oriented Programming Systems, Languages, and Applications (OOPSLA'95), pp. 187-199, Austin, Texas, USA, Oct. 15-19 1995 (also published in ACM SIGPLAN Notices 30(10) Oct. 1995)
		15	Sweeney, et. al., "A Methodology for Quantifying and Evaluating the Space Overhead in C++ Object Models", Computer Sciences/Mathematics RC 21370 (96227) (12/18/98) pp. 1-24
		16	Stanley B. Lippman, "Inside the C++ Object Model", Addison-Wesley, second edition, 1996, pp. 82-107
		17	B. Stroustrup, "The Design and Evolution of C++", Addison-Wesley, March 1994, pp. 257-276
		18	Ellis, et.al., The Annotated C++ Reference Manual", Addison-Wesley, Jan. 1994, pp. 195-237

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		19	Krall, et. al., "Near Optimal Hierarchical Encoding of Types", Proceedings of the 11th European Conference on Object-Oriented Programming (ECOOP'97) Lecture Notes in Computer Science, Jyvaskyla, Finland, June 1997, Mehmit Aksit, Satoshi Matsuoka (eds.), Springer Verlag, pp.128-145
		20	Flatt, et. al., "Classes and Mixins", POPL 98, San Diego, CA, pp. 171-183
		21	Linton, et. al., "Interface Translation and Implementation Filtering", Usenix Association, C++ Technical Conference Proceedings, Cambridge, MA, April 11-14, 1994, pp. 227-236
		22	B. Martin, "The Separation of Interface and Implementation in C++", Usenix Association, C++ Conference, pp.51-63, 1991
		23	B. Stroustrup, "Multiple Inheritance for C++", European Unix System User's Group Conference, May 1987, pp. 189-207

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